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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BOGART, MICHAEL G

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/757,786	<b>Applicant(s)</b> GABBAY, JEFFREY	
	<b>Examiner</b> MICHAEL G. BOGART	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 3761

## **DETAILED ACTION**

### ***Claim Rejections – 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinberg (US 5,856,248 A) in view of Gabbay (US 6,124,221 A; hereinafter ‘221), Gabbay (WO 01/81671 A2; hereinafter ‘671) and Gabbay (WO 01/74166 A1; hereinafter ‘166).

Regarding claims 1, 5 and 7, Weinberg teaches a disposable paper diaper and method for manufacturing the same, for combating diaper rash, said diaper comprising a plurality of fibers coated with an anti-bacterial water soluble form of copper, which fibers release cupric ions in cationic form when in contact with a fluid (col. 3, lines 37-54).

Weinberg does not disclose expressly a water-insoluble form of copper oxide directly bonded to paper fibers, anti-fungal properties or that the copper oxide is brown.

‘221 teaches an article of clothing including undergarments made of natural fibers having a plating that releases an anti-fungal effective amount of at least one oxidant cationic species of copper (abstract, col. 2, lines 15-25, col. 3, lines 34-40, col. 3, line 61-col. 4, line 4, claim 6). ‘221 further discloses that the plating involves direct bonding of metals or metal

Art Unit: 3761

oxides to the fibers (col. 2, lines 5-54). '221 does not expressly disclose which specific oxidant cationic species of copper is released, but CuO is referred to in the background.

'671 teaches similar fabrics to those of '221, which involves plating of metal or metal oxides to a natural fiber textile fabric. Specifically, '671 teaches that the ionic form of copper directly bonded to the fibers may include cupric oxide (CuO) or cuprous oxide (Cu<sub>2</sub>O)(page 6, lines 24-29). Cupric oxide and cuprous oxide are inherently water insoluble (see definitions of cuprous oxide and cupric oxide, *Hawley's Condensed Chemical Dictionary*).

'166 teaches antimicrobial textiles that have a water insoluble mixture of cupric oxide (CuO) and cuprous oxide (Cu<sub>2</sub>O) powder (abstract; page 4, lines 14-24; examples 1 and 2; claim 9). Cupric oxide is black in color while cuprous oxide is red. A mixture of cupric oxide and cuprous oxide is dark brown in appearance (see paragraph 4 of applicant's declaration under 37 CFR 1.132, dated 05 March 2007).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to substitute the soluble salts of Weinberg with the directly plated cationic copper methods of '221, '671 and the specific cationic species mixture of '166 in order to provide an art recognized effective antimicrobial compound that avoids the problems associated with indirect bonding via carriers or adhesives (see '671, page 1, last paragraph).

Where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. § 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007)(citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly, Applicant claims a combination that

Art Unit: 3761

only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent persuasive evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. § 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007)(citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396). Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. § 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

Regarding claim 8, the limitations concerning how the paper-based product is made from mulch and how the fibers are finely chopped before addition to the mulch are product-by-process limitations. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. MPEP § 2113. The determination of patentability in a product-by-process claim is based on the product itself, even though the claim may be limited and defined by the process. That is, the product in such a claim is unpatentable if it is the same as or obvious from the product of the prior art, even if the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). A product-by-process limitation adds no patentable distinction to the claim, and is unpatentable if the claimed product is the same as a product of the prior art. Weinberg teaches cellulosic fibers which are substantially the same as those made according to the claims (col. 3, line 2).

Art Unit: 3761

Regarding claims 2 and 6, Weinberg teaches cellulosic fibers (col. 3, line 2).

Regarding claim 3, see Weinberg, col. 2, line 49-col. 3, line 62.

Regarding claims 4 and 7, '221 teaches a skin contactable underwear liner comprising the antibiotic liner (col. 30, lines 50-53).

### ***Response to Arguments***

Applicant's arguments filed 25 June 2008 have been fully considered but they are not persuasive.

2. Applicants assert that neither the '221 patent or '671 publication describe paper-based products comprising fibers having copper dioxide directly bound to the surface of the fibers. This argument is not persuasive because '221 discloses a textile made of cellulosic fibers, which can be reasonably construed as a form of paper (col. 2, lines 15-25). '221 further discloses that metal oxides may be plated by electrolysis on the natural fibers. (col. 2, lines 26-45). '221 discloses that copper oxide is a suitable form of metal oxide for this application (col. 1, lines 21-27).

3. Applicants assert that Weinberg describes a different product and process than the instant invention. This argument is not persuasive because Weinberg teaches the basic concept of a paper-based (cellulose substrate; paper gauze) sanitary napkin with a form of copper having antibiotic properties bound to the fibers of the substrate (col. 2, lines 24-65). Replacing the antibiotic materials and process of applying the same of Weinberg with the plated copper oxide metals of '221 and '671 would provide for an art-recognized fabric/paper and method of making the same that would have effective antibiotic properties. Applicants assert that the materials and

Art Unit: 3761

methods of Weinberg are not functional equivalents to those of the secondary references. This argument is not persuasive because they are functionally equivalent in that they have effective antimicrobial properties that can be imparted to a fabric.

4. Applicants assert that neither '221 or '671 describe paper-based products comprising fibers having copper oxide directly bonded to the surface of the fibers. This argument is not persuasive because '671 describes cellulose fibers having copper oxide plated to the surface thereof (page 2, 4<sup>th</sup> full paragraph-page 3, 1<sup>st</sup> full paragraph; page 6, lines 4-6). Furthermore, '221 describes cellulose fibers having copper oxide plated to the surface thereof (col. 3, line 61-col. 4, line 4). The cellulose fibers comprise a fabric or substrate that can be reasonably construed as a form of paper. Furthermore, Weinberg expressly discloses that the substrate comprises cellulose fibers in the form of a paper gauze (col. 2, lines 60-65).

5. In response to applicant's argument that '661 did not describe paper products in which copper oxide was directly bound to cellulose fibers, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). '166 is only applied as a secondary reference that teaches that the combination of cupric oxide and cuprous oxide is recognized in the art as a suitable antimicrobial for use in fabric (see examples 1 and 2).

6. Regarding claim 3, applicants assert that Weinberg does not disclose coated fibers disposed in a product as randomly scattered fibers in a paper layer. This argument is not

Art Unit: 3761

persuasive because Weinberg discloses that the fabric may be a nonwoven and that the fibers of that fabric are in loose form (col. 2, line 49-col. 3, line 4). Even if all of the fibers of Weinberg's fabric are coated with the antimicrobial material, they can be reasonably be construed as randomly scattered.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL G. BOGART whose telephone number is (571)272-4933. The examiner can normally be reached on M-F, 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael G. Bogart/  
Examiner, Art Unit 3761

*/Tatyana Zalukaeva/  
Supervisory Patent Examiner, Art Unit 3761*